



A4 The Future of Fire and Explosion Investigations and Analyses

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After attending this presentation, attendees will gain information on a recent survey as to the future needs and trends in fire and explosion analyses and investigations.

This presentation will impact the forensic community by presenting the findings of a national survey as to the needs and trends in fire and explosion investigations and analyses. It will include a discussion of training as well as development of instrumentation and investigative tools. This will provide direction to analysts, students, researchers, and course developers.

Among the various types of criminal investigations and the varied specialties for forensic analyses, crimes associated with arson and explosions are sometimes the most difficult to process and analyze. The inherent destructiveness of the events often compromise much of the evidence left behind. Ignitable liquids and many individual chemical compounds are found as contaminants in various matrices from a fire scene. The residues produced from the complete reaction of explosives

are often gases. Those, which are not gases, are often so common that their presence is not meaningful.

While various professional organizations of forensic scientists and investigators have a high level of interest and desire in improving both the procedures at the scene and the capabilities of the laboratory, the status of investigations and analyses are not uniform across the nation. Among many scene investigators, there is a desire to use more scientific and forensically sound methods. Among laboratory analysts, there is a desire to be able to glean the most that science can reveal about the evidence and to attempt to approach the same levels of individualization as has been achieved in DNA analysis.

Recognizing the current state of affairs and wishing to provide guidance, the National Institute of Justice through the National Center for Forensic Science worked to assess the near- and long-term needs in Arson and Explosion analyses and Investigations. This work was primarily completed through a select committee of Technical Working Group for Fire and Explosions (TWGFEX) members. The assessment included TWGFEX members as well as additional representatives of the relevant communities. A survey instrument targeted to those communities was prepared. The survey results were collected in late September of 2007. The TWGFEX panel met in late September of 2007 to discuss the results of the survey. The group drafted their recommendations for a report which has been submitted to the National Institute of Justice. This presentation will provide an overview of that report and the results from the survey instrument. **Fire, Explosion, Arson**